

REMARKS

Claims 1-17 are pending in this application.

Claim Rejections under 35 USC §103

Claims 1 and 2 are rejected under 35 USC §103(a) as being unpatentable over Fujimoto (U.S. Patent No. 5,912,710) in view of Velez et al. (U.S. Patent No. 6,678,006).

The present invention is an image data output device (1000) that includes a scaling circuit (1) scaling moving image data according to the resolution of a display unit. Further included is a weighting factor multiplier circuit (2) multiplying OSD data by a weighting factor. Also included is a weighting factor multiplier circuit (3) multiplying the moving image data scaled by scaling circuit (1) by weighting factor (1 - fa). Still further included is a scaling circuit (4) scaling the OSD data multiplied by the weighting factor by weighting factor multiplier circuit (2), and a combining circuit (5) adding the moving image data supplied from weighting factor multiplier circuit (3) to the OSD data supplied from scaling circuit (4) to generate image data.

As recited in claims 1 and 10, the present invention takes first image data representing a moving image which is scaled and thereafter weighted by a first image data processing circuit. A second image data representing an image that includes characters and graphics is weighted and thereafter scaled by a second image data processing circuit. A first combining circuit then combines the first image data and the second image data.

Fujimoto describes a system for displaying graphics which includes an image display control apparatus (300) which has a first scalar (106), for changing pixel aspect ratio of the graphics data (100G). Further, a second scalar (107) is provided for changing a size of the motion picture data (100B) so that it fits in a video window of a given size on the monitor (200). As indicated in column 6, lines 28-39 of Fujimoto, an alpha-blending circuit (108) constructs pixels of picture elements by blending the motion picture data from the scalar (107) and the graphics data from the scalar (106). The construction ratio between the motion picture data and the graphics data is dependent on the value of alpha. The alpha value is a parameter for indicating a transmission degree of the graphics data in the respective pixels. The transmission ratio for the motion picture data in each pixels is represented as (1-alpha). When alpha = 1, only the graphics data are displayed, and the motion picture data are not displayed. When alpha = 0 only the motion picture data are displayed, and the graphics data are not displayed.

Therefore, it appears that the alpha-blending circuit (108) acts to combine image data by weighting individual pixels.

The Examiner admits that Fujimoto does not describe weighting the second image data and then scaling the weighted image data. However, the Examiner asserts Velez et al. shows in the lower part of Figure 2 taking video data (57) and then passing it through DVD video scaling module (52) then combining the signal in blending module (56) and scaling the combined signal in scaling module (61) to fit in a display area of a computer monitor. The operation of the blending module (56) is described in column 4, lines 21-33 of Velez et al.

However, neither Fujimoto nor Velez et al. describe scaling moving image data and thereafter weighting the scaled moving image data and weighting image data having characters and graphics and thereafter scaling said weighted image data having characters and graphics. In other words Funimoto and Velez et al. do not describe changing the order of scaling and weighting depending on the type of data being analyzed.

It is a feature of claim 1 of the present application that first image data representing a moving image is scaled and thereafter weighted by a first image data processing circuit while second image data presenting an image including characters and graphics is weighted and thereafter scaled by a second image data processing circuit. In other words, the present invention, according to claim 1, is directed to an image data output device that performs the weighting and the scaling in an order specific to the type of an image, namely in an order that is determined depending on the type of an image to be processed.

Although it seems that Fujimoto discloses the first image data processing circuit and the first combining circuit, there is no disclosure or suggestion of the second image data processing circuit in Fujimoto.

Velez discloses the blending module 56 that blends data and the scaling module 61 that scales an output signal from the blending module 56. However, Velez discloses that the blending module 56 blends the scaled video data 57 with scaled sub picture video data and then the scaling module 61 scales the blended data. In other words, although Velez discloses the configuration in which first image data representing a moving image and second image data representing an image

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including characters and graphics are blended and thereafter the blended data is scaled. Velez does not disclose or suggest the second image data processing circuit as claimed in claim 1 with which only the second image data representing an image including characters and graphics is weighted and thereafter scaled.

Fujimoto and Velez do not disclose the image data output device performing the scaling and the weighting in an order determined depending on the type of data to be processed, as is claimed in the instant application.

Therefore, claim 1 patentably distinguishes over the prior art relied upon by reciting,

“An image data output device receiving first image data representing a moving image and second image data representing an image including characters and graphics to output an image signal corresponding to a composite image generated by combining said first and second image data, comprising: a first image data processing circuit scaling said first image data and thereafter weighting said scaled first image data; a second image data processing circuit weighting said second image data and thereafter scaling said weighted second image data; and a first combining circuit combining said first image data processed by said first image data processing circuit and said second image data processed by said second image data processing circuit.”
(Emphasis Added)

Therefore, withdrawal of the rejection of Claims 1 and 2 under 35 USC §103(a) as being unpatentable over Fujimoto (U.S. Patent No. 5,912,710) in view of Velez et al. (U.S. Patent No. 6,678,006) is respectfully requested.

Claims 10 and 11 are rejected under 35 USC §103(a) as being unpatentable over Fujimoto (U.S. Patent No. 5,912,710) further in view of Velez et al. (U.S. Patent No. 6,678,006) as applied to claims 1 and 2 above, and further in view of Mills (U.S. Patent No. 5,953,691).

Mills describes a processing system with graphics data prescaling. This processing system includes an alpha prescaler (112) arranged between a converter (102) and a mixer (106). The alpha prescaler (112) multiplies the YUV signal by the quantity $1-\alpha$. α may represent one of nine blending values. The mixer (106) further contains an interpolator (114) that performs a horizontal filtering operation on the prescaled YUV signal and the initial alpha blending value to generate an interpolated scaled YUV signal. A multiplier (118) scales the decoded video signal and the result is combined with the interpolated scaled YUV signal in the signal combiner.

As previously discussed, neither Fujimoto nor Velez et al. describe scaling moving image data and thereafter weighting the scaled moving image data and weighting image data having characters and graphics and thereafter scaling said weighted image data having characters and graphics. In other words Funimoto and Velez et al. do not describe changing the order of scaling and weighting depending on the type of data being analyzed.

Therefore, claim 10 patentably distinguishes over the prior art relied upon by reciting,

“A receiving device comprising: a tuner selectively receiving a signal transmitting first image data representing a moving image and second image data representing an image including characters and graphics; a separating unit separating the received signal into a signal corresponding to said first image data and a signal corresponding to said second image data; a first and second data generate units generate said first and second image data respectively from an output of said separating unit; and an image data output device receiving said first and second image data from said first and second data generate units to output an image signal

corresponding to a composite image generated by combining said first and second image data, said image data output device including a first image data processing circuit scaling said first image data and thereafter weighting said scaled first image data, a second image data processing circuit weighting said second image data and thereafter scaling a multiplied second image data, and a first combining circuit combining said first image data processed by said first image data processing circuit and said second image data processed by said second image data processing circuit.”
(Emphasis Added)

Therefore, withdrawal of the rejection of Claims 10 and 11 under 35 USC §103(a) as being unpatentable over Fujimoto (U.S. Patent No. 5,912,710) further in view of Velez et al. (U.S. Patent No. 6,678,006), and further in view of Mills (U.S. Patent No. 5,953,691) is respectfully requested.

Conclusion

In view of the aforementioned remarks, the claims are believed to be in condition for allowance, which action, at an early date, is respectfully requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

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In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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